

**House Committee on Resources
Subcommittee on Water and Power**

***Protecting the Sacramento/San Joaquin Delta
and California's Water Supply:
Dealing with a Damocles Sword***

Testimony on H.R. 6014 by:

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California Department of Water Resources**



September 7, 2006

Sacramento-San Joaquin Delta



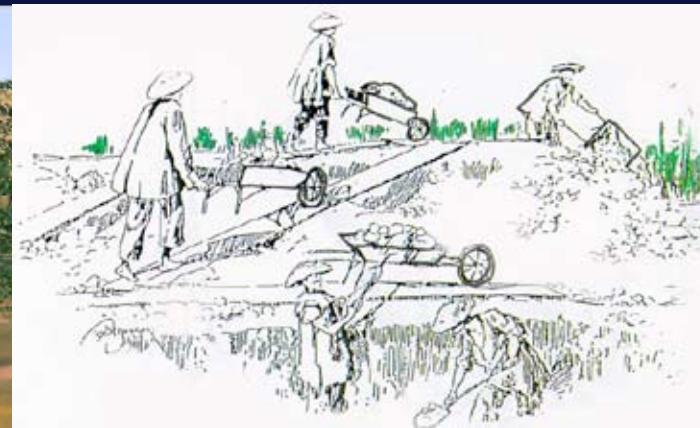
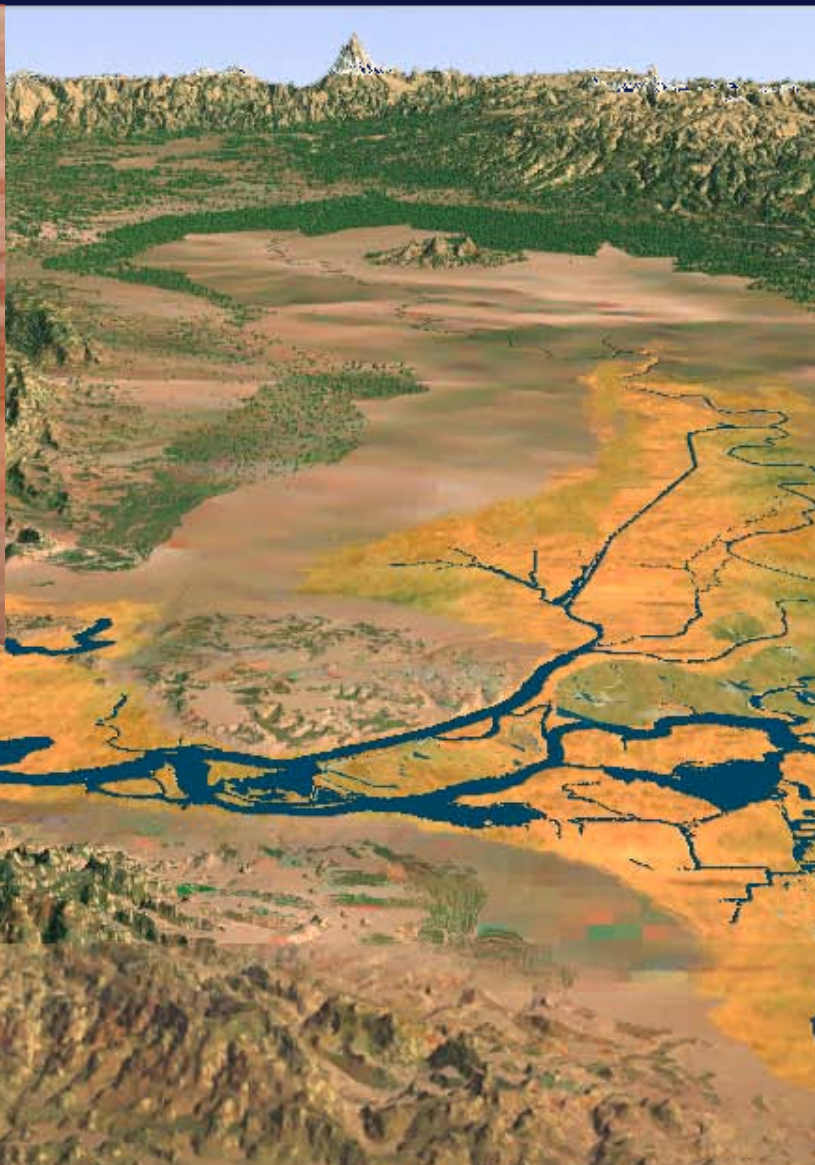
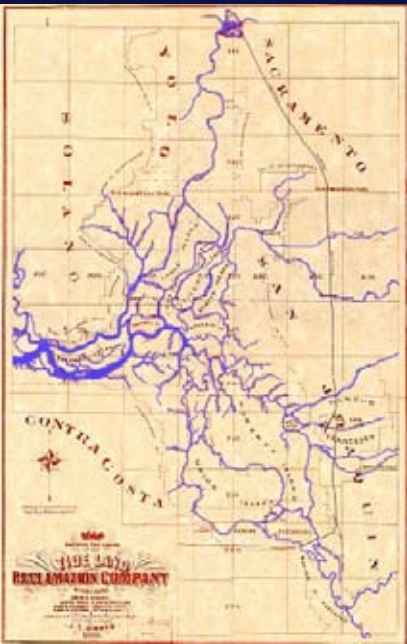
Sacramento

Stockton

San
Francisco

Sacramento – San Joaquin Delta

Reclamation of a Tidal Marsh – beginning in late 1860's



Delta Levees Constructed using Inappropriate Materials and Methods by Modern Standards



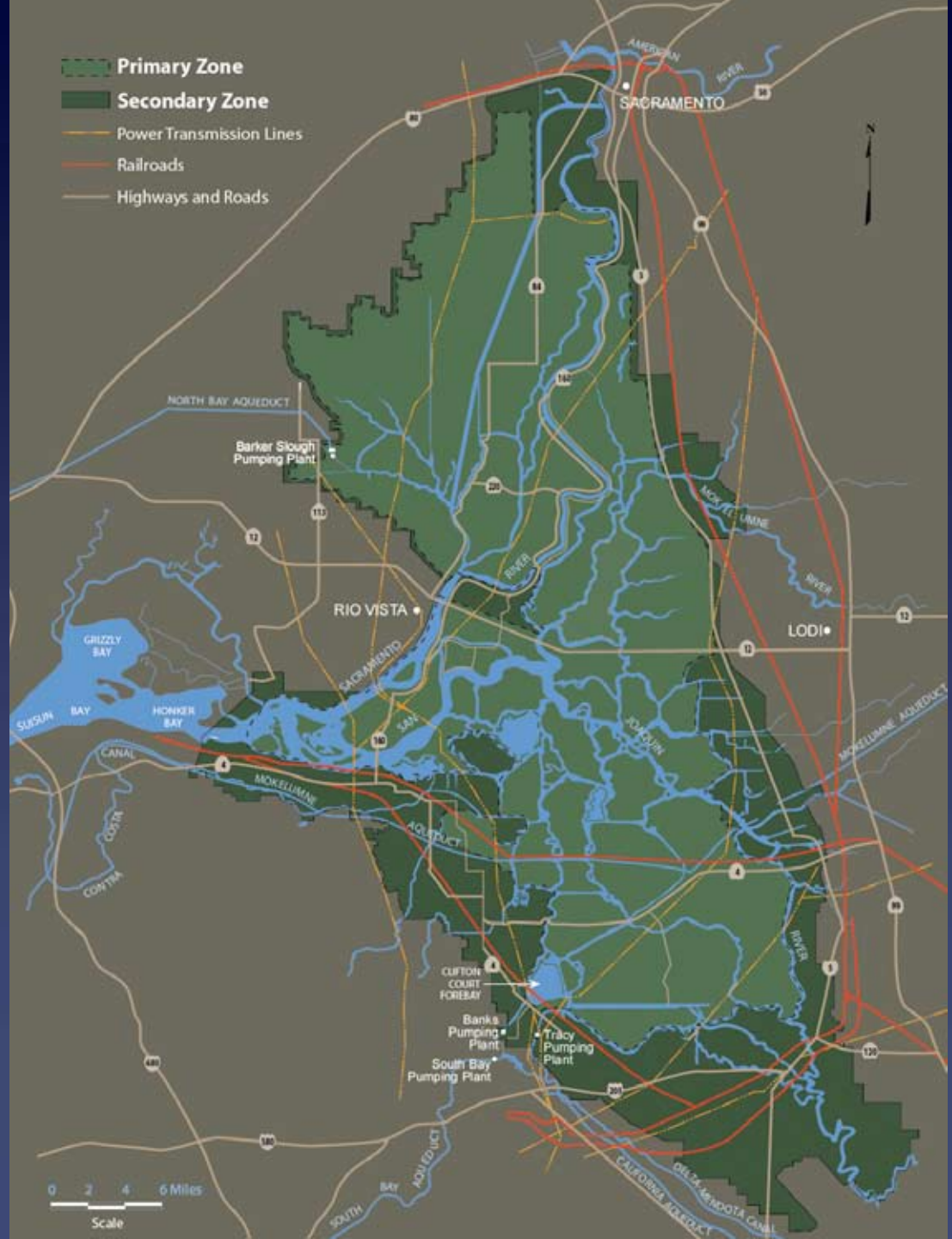
The Legal Delta:

738,000 acres

~ 60 islands/tracts

1,115 miles of levees

- 3 State Highways
- Major Rail Lines
- Major Water and Natural Gas Pipelines
- 1 Critical Natural Gas Reservoir
- 2 Deep Water Ports
- Major Power Transmission Lines



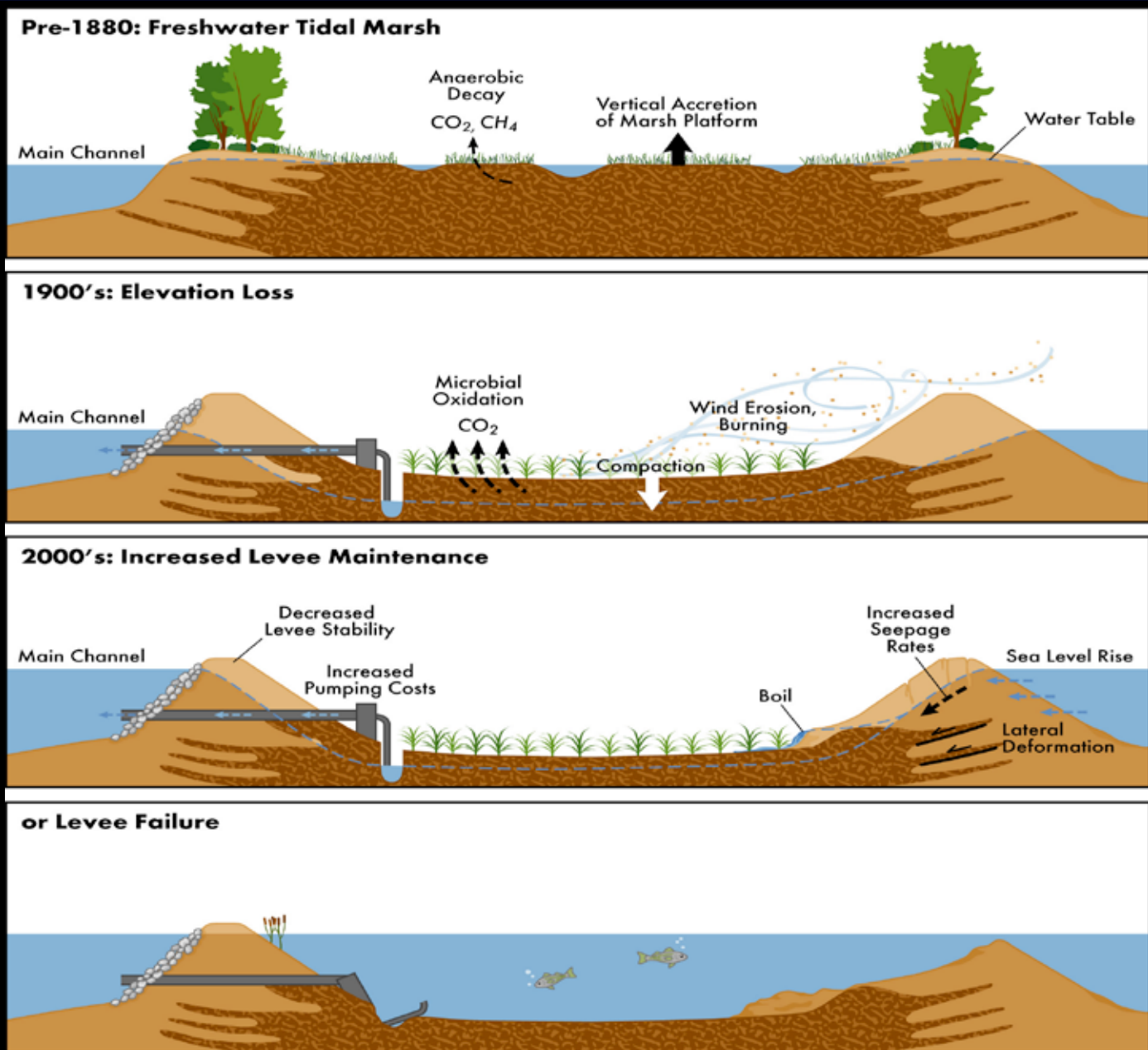
What Could We Lose?



- Supplies water to more than 22 million Californians, industry and agriculture
- Water supply supports \$400 billion state economy
- Home for more than 400,000 people
- Habitat for 500 species
- Highways, pipelines, power distribution, railroads, and deep water ports



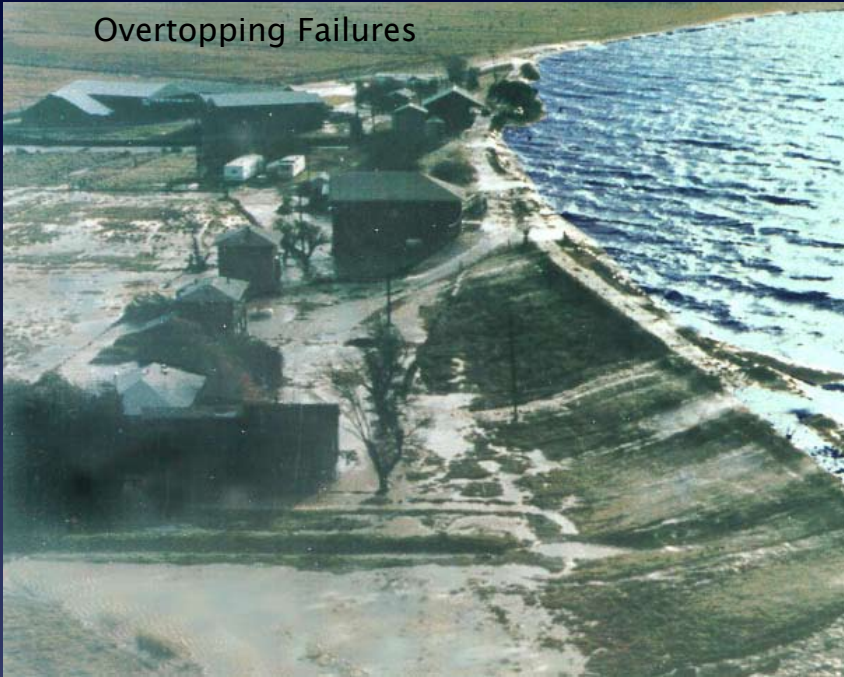
Delta Levees – Protect “Bowls” rather than Islands



Graphic courtesy
of Dr. Jeffrey
Mount

Risks to Levee Integrity

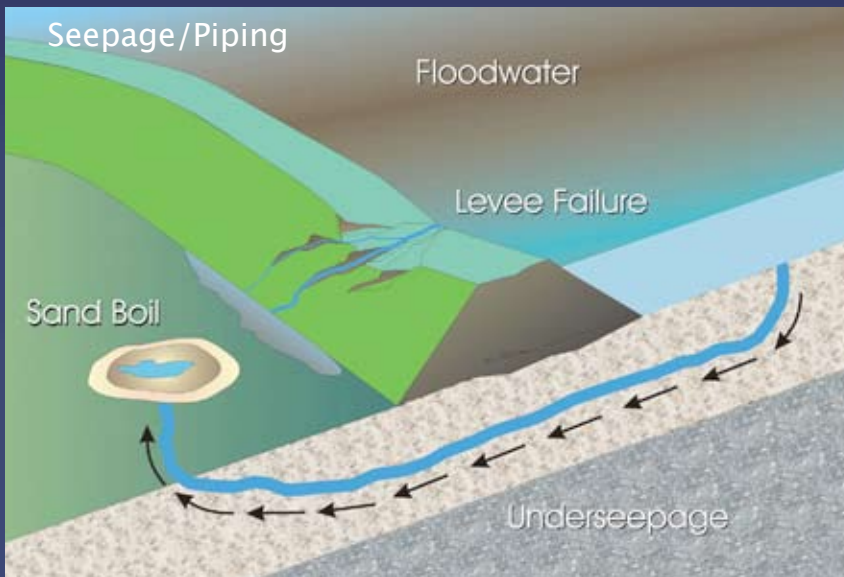
Overtopping Failures



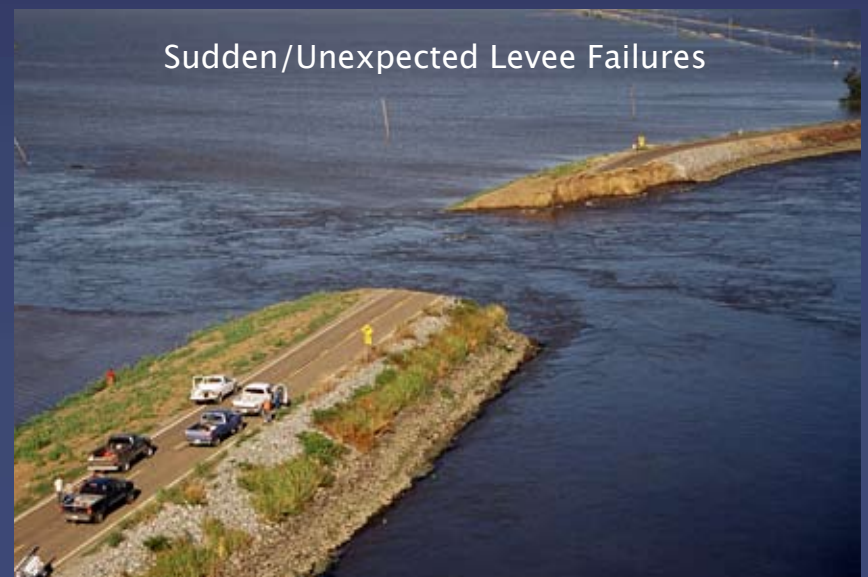
High Tides & Winds



Seepage/Piping



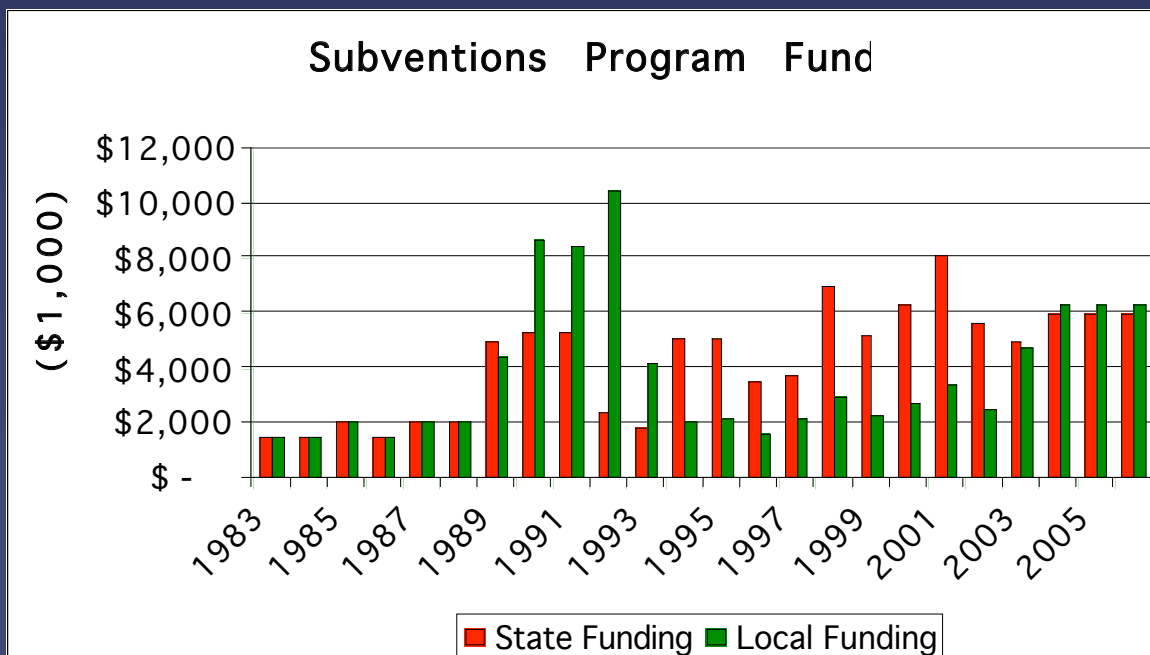
Sudden/Unexpected Levee Failures



California's Delta Levee Program

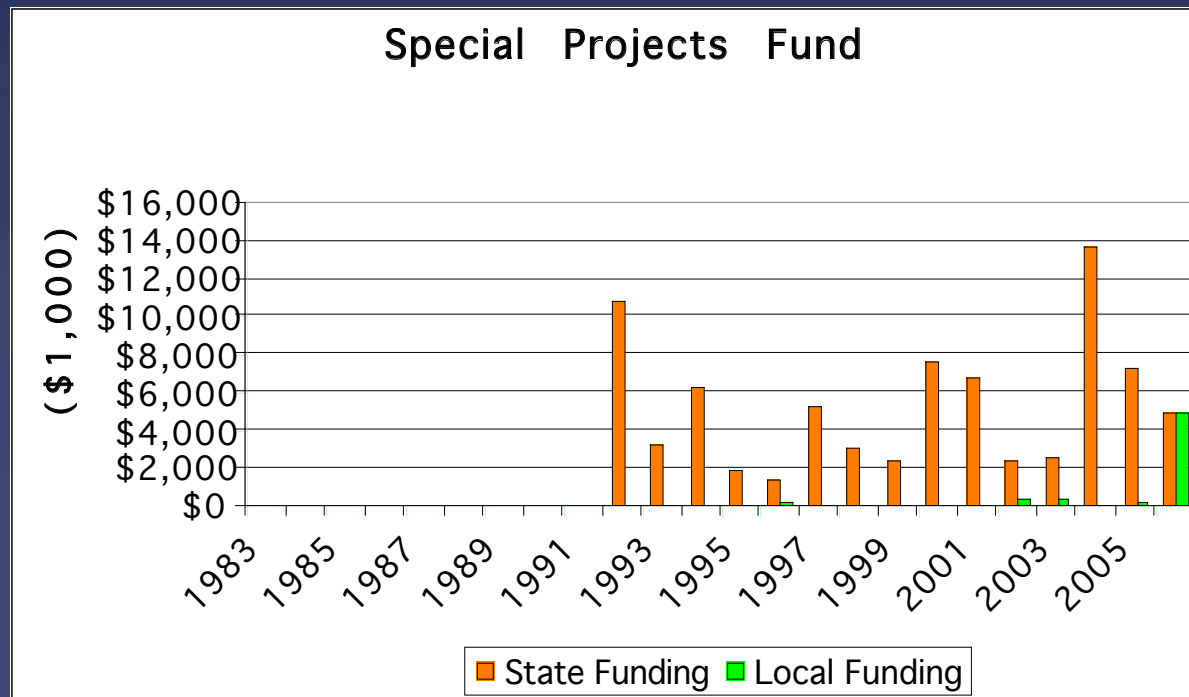
In 1973, the State passed legislation to provide reimbursement of eligible costs for levee maintenance and restoration. Over the intervening years this modest program has evolved into the following two programs:

- *The Delta Levees Maintenance Subventions Program (Subventions):* The Subventions Program reimburses local reclamation districts up to 75 percent of their levee maintenance costs. This program would also allow for levee upgrades, but funding has not allowed anything more than simple annual maintenance.



California's Delta Levee Program (continued)

- Special Flood Control Projects Program: In the 1990's the California Legislature developed this program to accomplish projects of specific interest to the State, notably on the 8 western islands critical to Delta water quality. This program provides grants to local reclamation districts for levee stability improvements, for emergency preparedness and response, for habitat improvements, for subsidence control, and studies to guide program implementation.



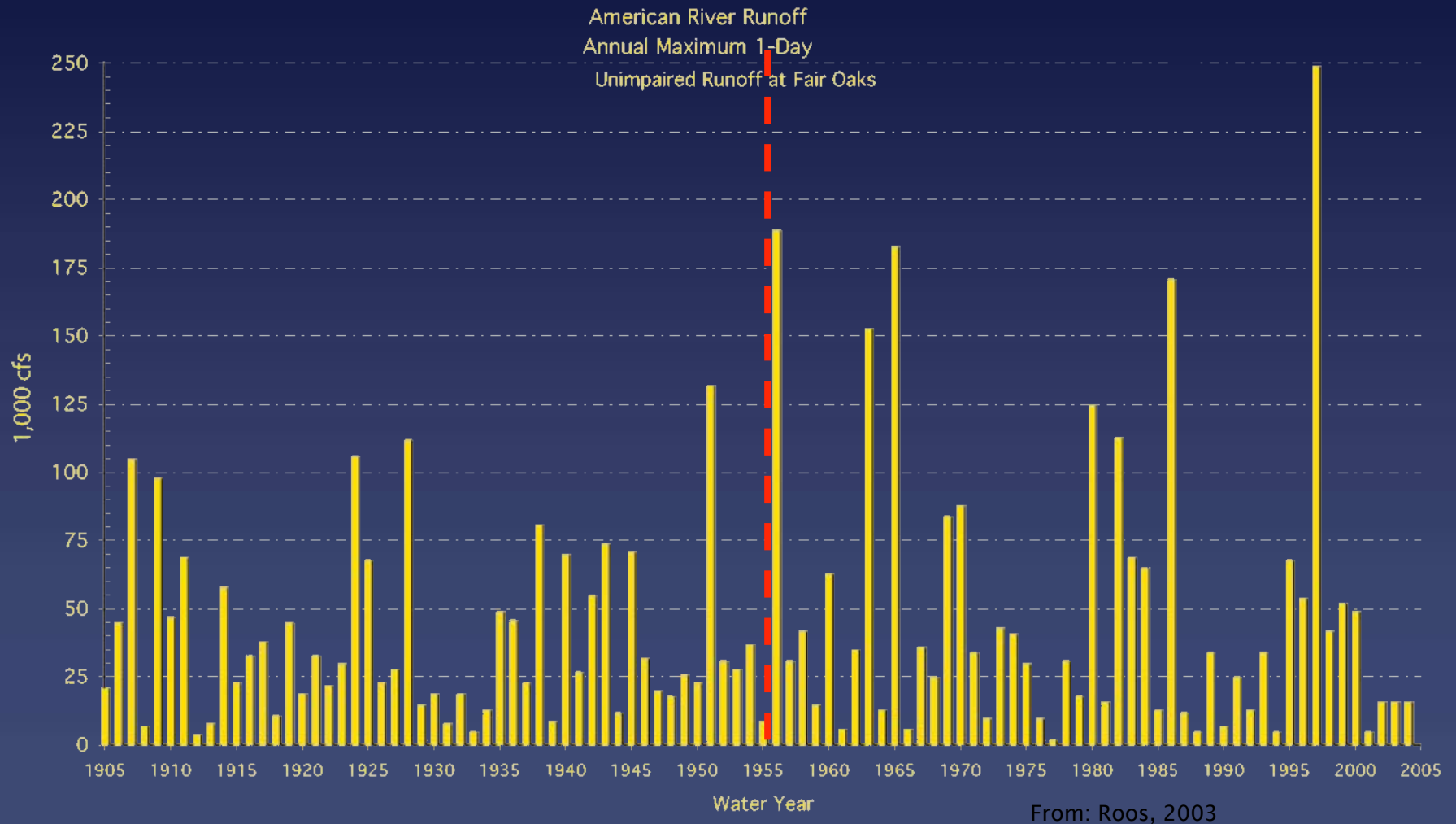
California's Delta Levee Program

Accomplishments:

- 】 Provided **\$288 million** for levee maintenance, upgrades, and habitat restoration over the last 32 years
- 】 Reduced the incidence of Delta levee failures
- 】 Provided funding to upgrade 42 miles of levee to PL84-99 Standards
- 】 Provided the funding for the reuse of 2,000,000 cubic yards of dredged material
- 】 Participated in the restoration of 2,600 acres of habitat
- 】 Provided funding for emergency advance actions to prevent the failure of 4 islands during the January 2006 storm events
- 】 Provided funding for the Delta Risk Management Strategy

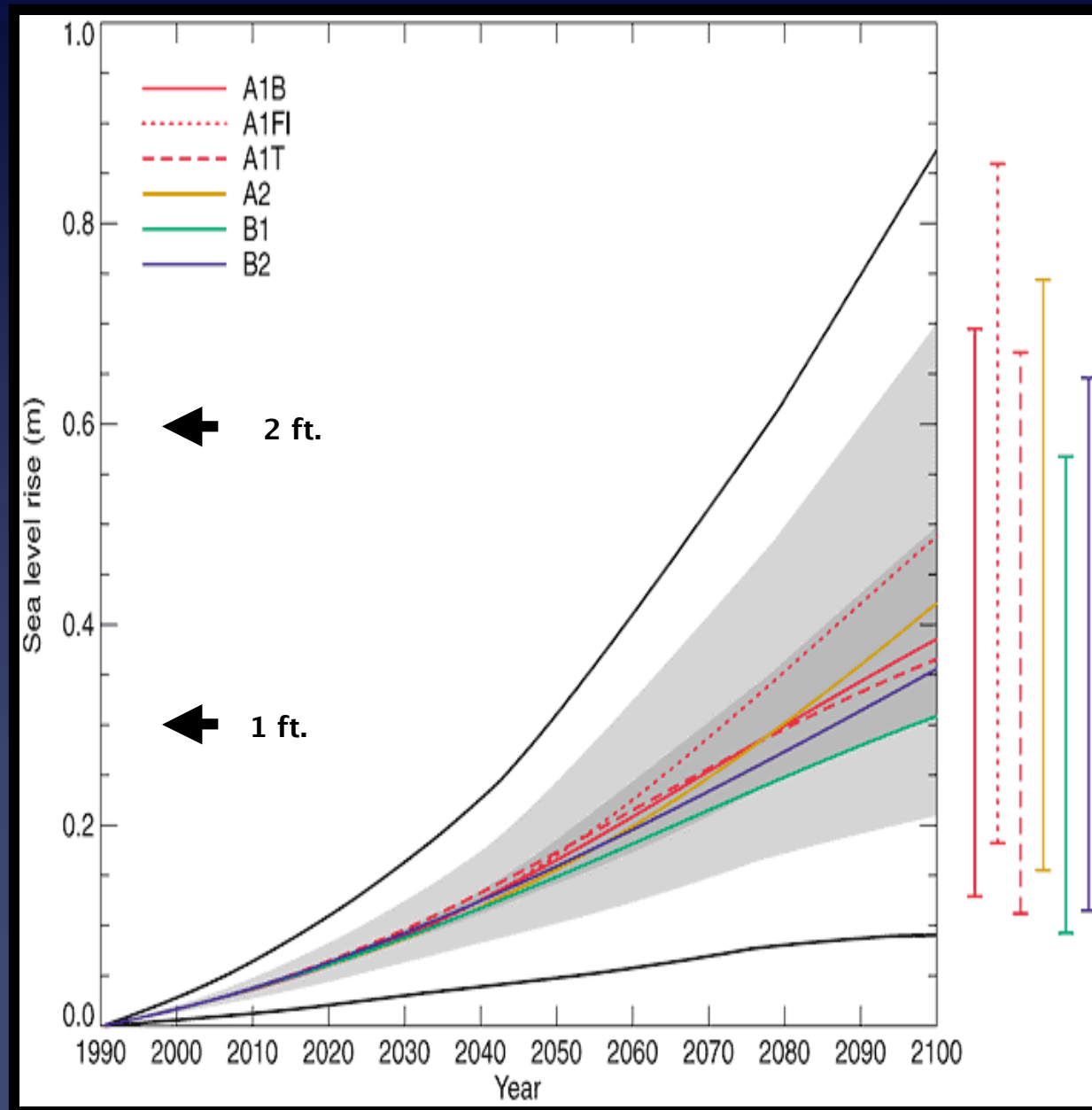
Sustainability Issues – Climate Change

Changing Hydrology



--- Folsom Dam completed

Sustainability Issues: Sea Level Rise



Source:
IPCC, 2001

Sustainability Issues: Catastrophic Earthquake-induced Levee Failures

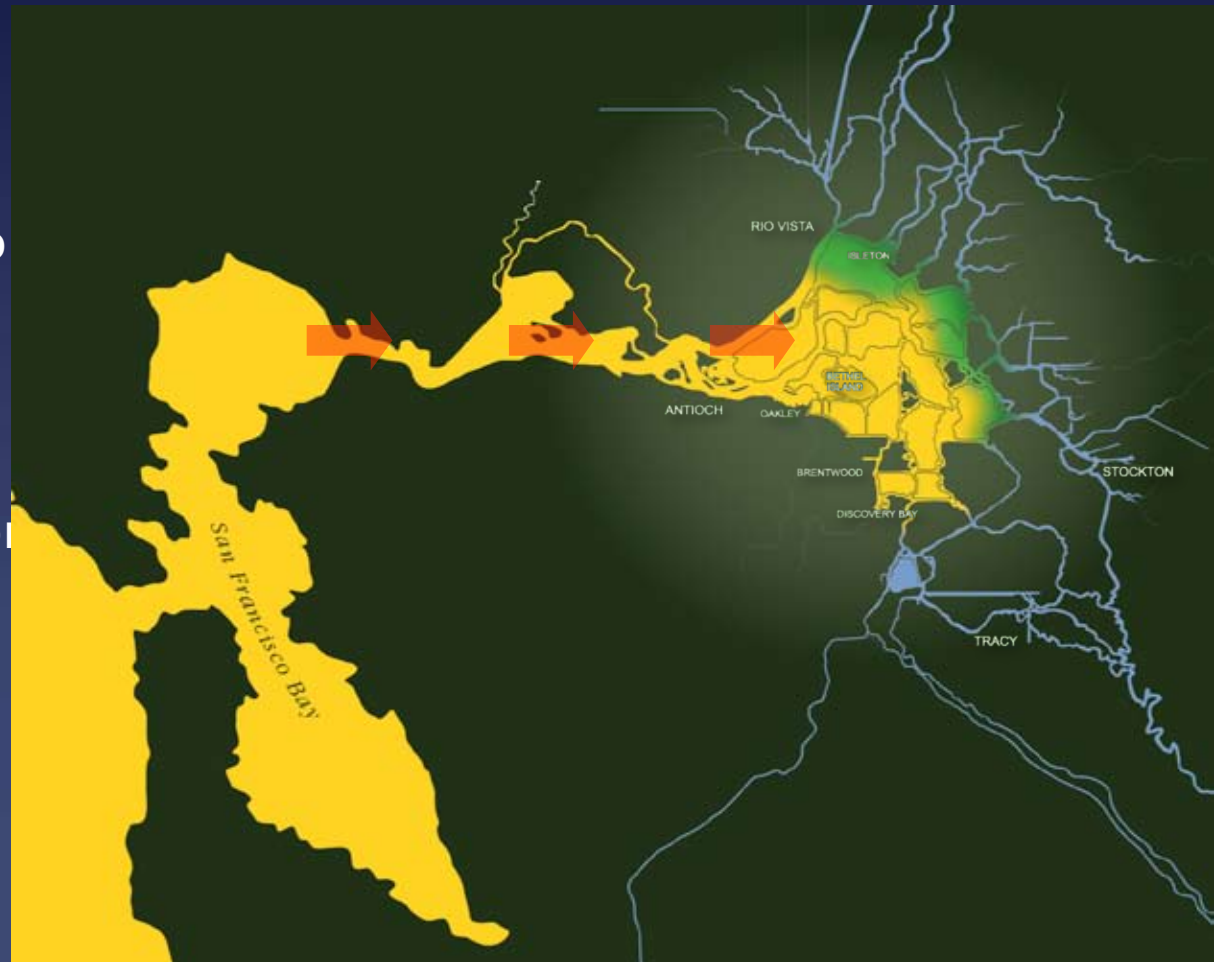
- Magnitude 6.5 Earthquake Scenario
- 30 levee breaches
- Flooding of 16 islands



Sustainability Issues: Catastrophic Earthquake–induced Levee Failures

When the Delta Levees Fail:

- 300 billion gallons of salt water flow into the Delta in first few days
- Water Export stops for months, if not years



California Initiatives: Delta Risk Management Strategy

- **Evaluate current and future risk**
- **Identify consequences**
- **Identify risk reduction measures, including levee upgrades and land use changes**
- **Evaluate alternative strategies to reduce risk**



Phase 1 Report on Evaluation of Risks Due March 2007

Phase 2 Report on Alternative Strategies to Reduce Risk Due October 2007

California Initiatives: Delta Vision Process

Initiated to encompass and integrate many separate planning efforts and to develop long-term strategies for a sustainable Delta

Goals:

- **Develop a durable Delta Vision that provides for the sustainable (100 years or more) use and protection of the Delta, Suisun Bay and Suisun Marsh.**
- **Develop a strategic implementation plan to achieve that common vision, including recommendations for public policy, resource management, levee maintenance, and funding**

Final Delta Strategic Plan due December 2008

California's Current Levee Crisis and State of Emergency

The State-Federal Levee System in the Central Valley is nearing a State of Collapse due to continued Levee Erosion and Flood Damage:

Sacramento Valley



- 29 Critical Erosion Sites** (~\$ 172 million, to be completed by Nov 1st)
- 4 Additional Critical Erosion Sites** (~\$ 6 million, Winter 2006/2007)
- 34 Order 1 (Urban) Critical Flood Damaged PL84-99 Sites** (~\$ 60 million, Winter 2006/2007)
- 48 Order 2 (Rural) Critical Flood Damaged PL84-99 Sites** (~\$ 110 million, Unscheduled)
- 27 New Critical Erosion Sites** (~\$ 23 million, Unscheduled)

142 Critically Damaged Levee Sites (~\$ 371 million)

~140 Order 3, 4, & 5 PL84-99 Sites (Unscheduled)



San Joaquin Valley

~ 80 Flood Damaged PL84-99 Sites (Unscheduled)

California's Current Levee Crisis and State of Emergency

The State-Federal Levee System in the Central Valley is nearing a State of Collapse due to continued Levee Erosion and Flood Damage:

Contributing Factor: *Inadequate Federal Participation
In traditional Federal Flood Control Responsibilities*

- The Federal Government has inadequate funding for Critical Erosion Repairs under the Sacramento River Bank Protection Project
- The Federal Government has NO FUNDING to repair flood damage to Federal levees under PL84-99



As a result, the State of California is funding the most crucial repairs ~\$250 million

California Voters Will Consider Two Flood Bond Measures in November 2006



Funding Category	Prop. 1E	Prop. 84
State–Federal Project Levees and the Delta	\$3 billion	\$550 mil.
Flood Control Subventions	\$500 mil.	\$180 mil.
Flood Corridors, Bypasses, and Mapping	\$290 mil.	\$ 70 mil.
Stormwater Flood Management Grants	\$300 mil.	--
Total	\$4.09 bil.	\$800 mil.

H.R. 6014: Improvement of California's Sacramento-San Joaquin Delta and Water Supply

The State of California supports federal funding for the maintenance and upgrades of Delta levees:

- Brings needed federal money for levee maintenance to the Delta**
- Provides funds to help maintain Delta levees which provide water conveyance for the Bureau of Reclamation's Central Valley Project**
- Reduces the risk of levee failure and threats to California's Water Supply, including the Central Valley Project**
- Level of funding proposed (\$10 million/year) is comparable to the historical average provided by the State**